

David Garrett



Matt Blunt, Governor • Doyle Childers, Director

DEPARTMENT OF NATURAL RESOURCES

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April 7, 2006

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RETURN RECEIPT REQUESTED

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RCRA RECORDS

Mr. Thomas S. Sanicola
Modine Manufacturing Company
1500 DeKoven Avenue
Racine, WI 53403-2552

RE: Comprehensive Historical Summary Document, Modine Manufacturing Company
Camdenton, Missouri, Facility, December 2005

Dear Mr. Sanicola:

The Missouri Department of Natural Resources has reviewed the "Comprehensive Historical Summary Document, Modine Manufacturing Company, Camdenton Missouri Facility" submitted to the department on December 8, 2005. This document was submitted pursuant to an August 16, 2005, meeting between the department and Modine. At this meeting, Modine proposed to compile an historical summary document that would include all historical work conducted at Modine that supports Modine's position that no further investigation of potential contaminant sources is necessary beneath the manufacturing building and along the former sewer line to Hulett Lagoon. Modine indicated that the summary report would also provide a further evaluation of the previous indoor air sampling results and an assessment of the chemical inventory in the manufacturing building as additional support for Modine's position. Modine stated that the summary document would include documentation of all subsurface work and investigations below the building, including information that had not been previously submitted to the department. While the "Comprehensive Historical Summary Document" does bring information from the historical investigations together in one place, it does not appear to include any "new" information. The indoor air discussion appears to reinforce the need for further investigation beneath the manufacturing building. Beyond that, the subject document simply rehashes all of the historical work that has been done and is not persuasive in its arguments that no further investigation is necessary.

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The "Comprehensive Historical Summary Document" does not provide adequate justification for the absence of soil contamination beneath the manufacturing building and along the former sewer line and will not be accepted in lieu of additional soil sampling in these areas. Soil sampling must be conducted beneath the manufacturing building and along the former sewer line to assess the potential contribution of residually contaminated soils to the pervasive groundwater contamination problem in the area. The department has discussed these issues in the March 22, 2005, Comprehensive Groundwater Monitoring Evaluation, the August 16, 2005, meeting between the department and Modine, the September 1, 2005, follow-up letter, and numerous other meetings and correspondence with Modine.

Modine shall submit a work plan in accordance with Section VIII. – Additional Work, of the Corrective Action Abatement Order on Consent (Order). The work plan must have a sufficient number of samples to adequately assess the presence or absence of soil contamination beneath the manufacturing building and along the former sewer line. Soil samples beneath the building shall be collected in the vicinity of the Former Monorail Vapor Degreaser and Still M567 (SWMU 26) and along the west wall of the manufacturing building, in the vicinity of the former Mudpits (SWMU 2). Soil samples shall be collected along the entire length of the former sewer line, from Modine's property line to the former Hulett Lagoon.

Modine has cited access issues as a reason for not collecting soil samples along the sewer line. Modine is obligated per Section XI. of the Order to use "Best Efforts" to obtain access to property not owned or controlled by Modine where work (investigation and/or remediation) may be required by the department. Modine shall submit a written request to the property owner requesting access to the property. The request shall be sent by certified mail, return receipt requested, with a copy to the department. In the event that Modine uses "Best Efforts" and an access agreement is not obtained, the department may assist Modine in obtaining access. In the event that the department obtains access, Modine shall undertake the department approved work on such property.

As we have discussed on several occasions over the past couple of years, collection of soil samples beneath the building and along the sewer line is essential to determine if these areas are acting as continuing sources to groundwater contamination. If, as Modine contends, contamination is not present at levels of concern in these areas, then confirmation of this contention through sampling should not be objectionable. This is not a particularly difficult or expensive undertaking, and the department intends to work closely with Modine to minimize disruption to Modine's ongoing manufacturing operations (as it has at several similar sites where investigations beneath active manufacturing buildings were conducted). Collection of soil samples beneath the building and along the sewer line are integral to completion and approval of the Resource Conservation and Recovery Act (RCRA) Facility Investigation, and achievement of the "Migration of Contaminated Groundwater Under Control" Environmental Indicator as well as satisfaction of the requirements of the Order.

The department's position and rationale regarding the need for additional soil samples has not changed and need not be discussed here. However, there are a few issues and erroneous statements in the summary document that cannot be ignored. Excerpts from the summary report are contained in quotes followed by the department's comments.

- ♦ **Page 9, Section 3.1.2, City Owned Domestic Wastewater Line, Conclusion.** "Since the wastewater line that was connected to the Hulett Lagoon is City owned and operated, it is not covered under the AOC [Administrative Order on Consent] for Modine. In addition, the continual flushing action of the leaking line would result in no significant concentrations of VOCs remaining along the line. Therefore, no further investigation needs to be completed for this area."

On August 18, 2005, the department forwarded to Modine an electronic copy of an U.S. Environmental Protection Agency letter, dated March 10, 1997. The letter discusses the applicability of the Domestic Sewage Exemption (DSE) for sewer lines that leak prior to waste reaching a publicly owned treatment works (POTW). The memorandum states that if a mixture of chemical process waste and sanitary waste leaks from the sewer line before it reaches the POTW, the leaked material does not qualify for the DSE. To qualify for the DSE, wastes must pass through a sewer system to a POTW (261.4(a)(1)(ii)). Wastes that leak from a sewer line before reaching the POTW have not met the conditions of the exemption thus losing their "excluded" status and become subject to regulation as a solid waste. A release of such waste can be considered a Solid Waste Management Unit or Area of Concern under Section 3004(v), Section 3005(c)(3), and Section 3008(h) of RCRA. A copy of this letter is included as an enclosure to this letter.

Modine continues to assert that the continual flushing action of the leaking line would result in no significant concentrations of volatile organic compounds remaining along the line. As discussed previously by the department, non-aqueous phase trichloroethene released from the sewer line may exist as residual saturation providing a source for dissolution to groundwater. Non-aqueous phase constituents are not easily flushed from residually contaminated soils because of the physics holding them in small- and dead-end pores. Differences in soil properties such as density, porosity, organic content, and pore throat size would also affect the rate of migration and extent of contaminant releases along different portions of the sewer line. The concentration of residual hazardous constituents in soil need not be highly elevated to represent a source for continued groundwater contamination, as was demonstrated during the previous removal of contaminated soil on the Modine property that was predicated on the site-specific leaching potential to groundwater from that soil.

- ♦ **Page 21, Section 3.3.4, Chemical Inventory, Conclusions.** "Based on an assessment of the MSDS [Material Safety Data Sheets], it is highly unlikely that emissions from products used within the facility would have been the source for chlorinated VOCs, particularly TCE, detected in the indoor air sampling."

This suggests that the indoor air levels in the building are from a source other than products currently used inside the building by Modine. Potential sources to indoor air could be from contaminated soil or subgrade water below the building footprint or residually contaminated soils just to the west of the building. Soil sampling beneath the building footprint would aid in determining the source of the noted indoor air concentrations as well as addressing the issue related to potential leaching of contaminants to groundwater. Again, Modine's finding here simply reinforces the need for further investigation beneath the building footprint.

- ♦ **Page 29, Section 4.1, Conclusions, Adequate Definition of the Extent of TCE in Groundwater in "Deep" Zone South of the Modine Facility.** "MDNR believes that the sentry well MW-10 is too distant from the source area and screened too deep (200 feet deeper than the other deep wells) to serve as an effective sentry well."

The department has not stated that MW-10 is not an effective sentry well. Rather, the department stated that MW-10 is too distant from the source area and screened too deeply to adequately define the southern extent of the plume in the so-called "deep" zone. The purpose of monitoring well MW-10 is to detect contamination before it reaches the Blair Well, a city of Camdenton municipal well, as MW-10 is located between the Blair Well and Modine/former Hulett Lagoon and is screened at the same depth as the Blair Well (553 to 493 feet above mean sea level). Sampling results from MW-10 have demonstrated that TCE contaminated groundwater has not reached the Blair Well. However, MW-10 was not installed to determine the southern extent of contamination in the so-called "deep" zone (755 to 650 feet above mean sea level). A monitoring well south of Modine screened across the same interval as other on-site monitoring wells would define the southern extent of the plume and could be used to detect increasing/decreasing concentration trends prior to reaching MW-10.

- ♦ **Page 30, Section 4.1, Conclusions, Adequate Definition of the Extent of TCE in Groundwater in the "Perched" Zone North of Former Hulett Lagoon and South of the Modine Facility.** "The MDNR also requested the addition of a monitoring well south of the Modine Facility for additional delineation in the shallow zone. As agreed upon in the August 16, 2005 meeting, the need for a shallow well south of the facility is not necessary."

The department did not agree that a shallow well south of the facility is not necessary. Rather, the department deferred the installation of a shallow well immediately south of Modine pending the outcome of the Remedial Design (RD)/Remedial Action (RA) process conducted as part of the Sundstrand Superfund investigation. The department also agreed to defer the installation of a deep well south of Modine and a shallow well north of the former Hulett Lagoon pending the outcome of the RD/RA. If the RD/RA process does not satisfy the department's concerns, then Modine will be required to install the noted monitoring wells.

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Collection of soil samples beneath the building and along the sewer line are essential to determining if these areas are continuing sources for groundwater contamination. Completion of these soil investigation activities should provide sufficient data for approval of the RCRA Facility Investigation, provide the basis to finalize the "Migration of Contaminated Groundwater Under Control" Environmental Indicator evaluation, and may, ultimately, be sufficient to satisfy the terms of the Order.

Modine has 30 calendar days from receipt of this letter to submit a work plan in accordance with Section VIII. of the Order. If you have any questions, please contact Christine Kump-Mitchell, P.E., of my staff at the Missouri Department of Natural Resources, 7545 South Lindbergh, Suite 210, St. Louis, MO 63125-4839, or by phone at (314) 416-2960.

Sincerely,

HAZARDOUS WASTE PROGRAM



 Robert K. Morrison, P.E.
Chief, Permits Section

RKM:ckmm

Enclosure

c: Mr. John Hooker, SECOR
Mr. David Garrett, U.S. EPA, Region VII ✓
Ms. Shelley Woods, Attorney General's Office

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MARCH 10, 1997

Mr. William L. Warren
Drinker Biddle and Reath
1009 Lenox Drive
Building 4
Lawrenceville, New Jersey, 08648

Dear Mr. Warren:

Thank you for your March 5, 1996 letter to Michael Shapiro. In your letter, you requested guidance, directives or policy documents which address the applicability of the domestic sewage exclusion (Code of Federal Regulations, 40 CFR 261.4(a)(1)) in various situations.

As explained in your phone conversation with Kristina Meson, my staff and I have closely examined the matters raised in your letter. We have also reviewed the existing regulations and policies to ascertain whether they address the particular issue(s) which you identified. Provided below are responses your questions.

Question 1

Is the mixed stream of both chemical process waste and untreated sanitary waste which is discharged from a manufacturing plant through a sewer line to a publicly owned treatment works excluded from either the definition of solid or hazardous waste under the Resource Conservation and Recovery Act (RCRA) even if it would otherwise be considered a listed or characteristic hazardous waste?

A mixed stream of process and untreated sanitary waste which is discharged through a sewer line to a publicly owned treatment works (POTW) is not a solid or hazardous waste under RCRA, even if it would otherwise be considered a listed or characteristic hazardous waste. Section 1004(27) of RCRA provides that solid or dissolved material in domestic sewage is not solid waste as defined in RCRA. A corollary is that such material cannot be considered a hazardous waste for purposes of RCRA. This exclusion is known as the Domestic Sewage Exclusion (DSE). The DSE covers industrial wastes discharged to POTW sewers containing domestic sewage, even if these wastes would be considered hazardous if discharged by other means. "Domestic sewage" means untreated sanitary waste that passes through a sewer system. 40 CFR part 261.4(a)(1)(ii). The DSE, however, does not apply if the industrial waste stream never mixes with sanitary waste in the sewer prior to treatment or storage at the POTW (e.g. dedicated pipe). Mixtures of sanitary waste and other wastes that pass through sewer systems to publicly owned treatment works will, however, be subject to controls under the Clean Water Act, specifically, pretreatment standards at 40 CFR Part 403, including any applicable local limits imposed by the State or POTW, or by nationally applicable categorical pretreatment standards.

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Question 2

Would a mixed stream of both chemical process waste and untreated sanitary waste which is discharged from a manufacturing plant through a sewer line connected to a publicly owned treatment works which would otherwise be considered a characteristic or listed hazardous waste under RCRA be considered a hazardous waste and/or be required to be managed as a hazardous waste if it leaks from the sewer line before it reaches the publicly owned treatment works?

A mixed stream of chemical process waste (considered a characteristic or listed hazardous waste under RCRA) and sanitary waste which subsequently leaks from the sewer line before it reaches the POTW would not qualify for the Domestic Sewage Exclusion (DSE). To qualify for the DSE, wastes must pass through a sewer system to a publicly owned treatment works (261.4(a)(1)(ii)). Specifically, EPA has clarified in a February 12, 1990 letter (enclosed) that wastes removed from a sewer line before they reach the POTW have not met the conditions of the exemption. "The waste, upon removal, loses its "excluded" status under the domestic sewage exclusion and becomes subject to regulation as a solid waste."

Question 3

If a manufacturing facility with a RCRA corrective action permit has discharged waste materials of a mixed process and sanitary nature through a sewer line to a publicly owned treatment works, would a leak from the sewer line beyond the physical boundary of the manufacturing facility give rise to a solid waste management unit for which the operator of the manufacturing facility is responsible or would it fall outside the definition of a solid waste management unit?

Under RCRA corrective action authorities, permits for hazardous waste treatment, storage, or disposal facilities must require corrective action for releases of hazardous waste and hazardous constituents from solid waste management units. Corrective action is also required for releases that migrate beyond the facility boundary, as necessary to protect human health and the environment (See, e.g., RCRA Sections 3004(u), 3004(v), 40 CFR 264.101; 50 FR 28702, July 15, 1985; 52 FR 45788, December 1, 1987; and, 55 FR 30798, July 27 1990). The Agency also has the authority to include corrective action requirements in a facility's permit under its RCRA "omnibus" authority. See RCRA section 3005(c)(3). EPA has defined facility, for the purposes of corrective action, to mean "all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA." (See 40 CFR 260.10.)

As discussed in our response to question 2, materials leaked from sewer lines before they reach a POTW are no longer shielded by the DSE and are considered solid waste. Depending on whether or not the pipes from which the materials leaked are considered part of a "facility," they would or would not be subject to corrective action. Generally, releases from pipes or collection systems controlled by the owner/operator of a facility subject to corrective action would be considered part of the "facility" and would, therefore, also be subject to corrective action, as follows.¹

If it is determined, based on site-specific considerations, that a sewer line is part of a "facility" for purposes of corrective action, leaks from the line could likely be addressed as either solid waste

Thomas A. Corbett
Environmental Chemist I
New York State DEC
600 Delaware Avenue
Buffalo, New York
14202

Dear Mr. Corbett:

This letter is in response to your letter of October 31, 1989, in which you requested clarification of the domestic sewage exclusion of 40 CFR 261.4 (a) (1) (i) and (ii) as it may relate to excavated sludge from a sewer line. We understand that you have spoken with Region II personnel who referred you to the Office of Solid Waste (OSW). We have enclosed a copy of the memorandum you mentioned in your letter from Marcia Williams to David Stringham dated December 12, 1986. You have related to Emily Roth of OSW your request for a written response from EPA on this issue.

The situation as described in your letter involves waste removed from the low points of storm sewer lines by excavation. Apparently, the sewer occasionally becomes blocked as a result of the settling of solids from the sewage. The plan is to place the waste material in waste hauling vehicles and transport it to the publicly-owned treatment works (POTW), where it will be discharged into the system for processing. The waste is EP toxic for lead. Your letter asks if the waste: (1) retains its non-hazardous status under the domestic sewage exclusion after excavation from the sewer line or (2) is subject to regulation as a hazardous waste.

The domestic sewage exclusion of Section 261.4(a) (1) (i) states that neither domestic sewage nor any mixture of domestic sewage and other wastes that "passes through a sewer system to a publicly-owned treatment works for treatment" are solid waste. In the situation you describe, the sludge is removed from the sewer line and, therefore, does not pass through the sewer system to the POTW. The waste, upon removal, loses its "excluded" status under the domestic sewage exclusion and becomes subject to regulation as a solid waste. If the waste exhibits any of the characteristics of hazardous waste as described in 40 CFR Part 261, Subpart C, it must be regulated as a hazardous waste. In order for a POTW to receive hazardous waste, the POTW must be in compliance with the requirements of 40 CFR Section 270.60(c).

ⁱ Please note that the determination of what constitutes the "facility" for purposes of corrective action will be influenced by a number of site-specific factors. In the case of a sewer line, for example, a number of factors might influence whether or not the line was part of a "facility" including, for example, whether the facility owner/operator (e.g., versus the POTW) also owns or operates the line or portions of the line, whether the facility owner/operator (e.g., versus the POTW) is responsible for maintenance of the line or portions of the line, and/or the extent to which the line is dedicated to facility operations (e.g., versus carries wastes from many unrelated facilities). Owner/operators should consult with the appropriate EPA Regional Office or authorized state to determine the extent of their "facility" for purposes of corrective action.

management units (SWMU) or areas of concern (AOC). EPA typically distinguishes between releases that constitute SWMUs and releases that constitute AOC by considering factors such as the rate of leakage and whether the release was routine or systematic. (55 FR 30808, July 27, 1990; 61 FR 19442, May 1, 1996.) At permitted facilities, releases from solid waste management units that occur at facilities are typically addressed using the authority of RCRA Sections 3004(u), while releases from facilities (i.e., beyond the facility boundary) are addressed using RCRA Section 3004(v). Non-SWMU related releases (i.e., AOC), either within or beyond the facility boundary, are typically addressed using the omnibus permitting authority of RCRA section 3005(c)(3) where necessary to protect human health and the environment. In addition to the corrective action authorities associated with RCRA permitting, where applicable, the interim status corrective action order authority of section 3008(h) may also be used to address similar types of releases at interim status facilities. Since both SWMUs and AOCs are subject to corrective action requirements, EPA has discouraged extended debate over distinctions between SWMU and AOC; discussions, and resources, should more properly focus on whether there has been a release that requires remediation (60 ER 19442, May 1, 1996).

Note that, application of corrective action requirements typically depends on a number of site- and waste-specific considerations that EPA typically uses when developing site-specific corrective action requirements. I encourage you to consult with the appropriate EPA region or authorized state to ensure that site-specific circumstances are appropriately considered. In addition, whether or not corrective action requirements apply, cleanup of releases of solid waste may be required under a number of federal or state authorities, including, at the federal level, RCRA section 7003 or CERCLA section 106.

Question 4

If a manufacturing facility with a RCRA corrective action permit discharges mixed process and sanitary waste materials to a publicly owned treatment works through a sewer line, does a basis exist for including in that corrective action permit areas of contamination beyond the physical boundaries of the manufacturing facility owned and operated by the permittee caused by a leak from the sewer line at a point beyond the physical boundary of the manufacturing facility owned and operated by the permittee?

See response to question 3.

Thank you for your interest in the hazardous waste regulations. If you need more information on the domestic sewage exclusion, please contact Kristina Meson, of my staff, at (703) 308-8488. Questions on RCRA corrective action should be addressed to Elizabeth McManus in the Corrective Action Programs Branch at (703) 308-8657. Also, in authorized states, the state implements its own regulations in lieu of the Federal RCRA program. An authorized state's requirements and policies may be different than those of the Federal program, therefore, it is important to contact your state environmental agency about this and other RCRA issues.

Sincerely,

David Bussard, Director
Hazardous Waste Identification Division

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